REMARKS

In the Office Action mailed April 6, 2006, the Examiner noted that claims 1-10 were pending, and rejected claims 1-10. Claims 4 have been amended, claim 11 has been added and, thus, in view of the forgoing claims 1-11 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections are traversed below.

REJECTIONS under 35 U.S.C. § 112

Claim 4 stands rejected under 35 U.S.C. § 112 as being indefinite. Claim 4 has been amended to address the use of the auxiliary verb "can" in the claim. Withdrawal of the rejection is respectfully requested.

REJECTIONS under 35 U.S.C. § 103

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as obvious over Kodaira in view of Schneider. The Kodaira patent discusses a method of determining the type of an image scanned in to a system. The present claims are method of digitizing a questionnaire or exam, and determining if a box of either type of document is checked off, by dividing an image in to areas of useful and useless information.

At column 5, lines 36-53, the Kodaira discusses determining the following types of image data:

1.   The background is uniform, and only characters, drawings and tables are present.

2.   The background has dots, and only characters, drawings and tables are present.

3.   Only dot photograph is present.

4.   Only continuous photograph is present.

5.   At least one of characters, drawings and tables coexists with dot photograph, and also it is possible to extract a rectangular region; or at least one of characters, drawings and tables coexists with continuous photograph, and also it is possible to extract a rectangular region.

6.   At least one of characters, drawings and tables coexists with dot photograph, and it is impossible to extract a rectangular region; or at least one of characters, drawings and tables coexists with continuous photograph, and it is impossible to extract a rectangular region.

Dot and photograph are designated as key regions in order for the type of document to be discriminated.

Kodaira does not disclose "discriminating at least between two types of areas, that is, a useful information area having useful information for document processing and an useless information area having no useful information area," but discriminating to determine image type.

Schneider discusses a method of determining whether a questionnaire has been marked by comparing the unaltered image of a questionnaire to the altered image of a questionnaire. Schneider discloses "the ratio of the densities of the marks in the adjacent areas is used to determine if the mark is spurious or real. If the ratio of the current mark to the mark above or below the area of interest is less than some given amount A, then the mark is determined to be spurious and is removed from the associated answer pool. If the ratio is greater than A and less than a given amount B, the mark is flagged as being questionable." (See Column 7 line 65 through column 8 line 4.) Therefore, Schneider uses a ratio to determine if a mark is real or not, not to increase "the ratio of the useful information area to the entire area by processing at least one of a first partial image data which is image data of a portion for display of the useful information area and a second partial image data which is image data of a portion for display of the useless the information area based on the discrimination by said area discrimination unit."

Further Schneider does not disclose areas of useful information or areas of useless information.

For the reasons stated above, the combination of Kodaira and Schneider does not teach or suggest the elements of independent claims 1 and 5-10 and the claims dependent therefrom. Withdrawal of the rejections is respectfully requested.

On page 5 of the Office Action, Examiner rejects dependent claim 2. As argued above, the combination of Kodaira and Schneider does not teach or suggest the elements of the independent claims and therefore the same reference cannot sustain the rejection as regards a dependent claim. Further, Schneider discusses "determining the type of the image data on the basis of the distribution of the regions attribute of which discriminated by the discriminating means." Column 2 lines 17-20. In contrast, it does not disclose counting the number of pixels and therefore does not disclose "using discrimination unit considers at least one direction in counting a number of pixels assumed to be used in displaying information about a document image represented by the image data, and discriminates the useful information area from the useless information area based on a counting result."

For the reasons stated above, the combination of Kodaira and Schneider does not teach or suggest the elements of dependent claims 2. Withdrawal of the rejection is respectfully requested.